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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/650,450

08/27/2003

Rinaldo Poluzzi

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03/08/2006

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EXAMINER

DESTA, ELIAS

ART UNIT

PAPER NUMBER

2857

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Notice of Allowability	Application No.	Applicant(s)	
	10/650,450	POLUZZI ET AL.	
	Examiner	Art Unit	
	Elias Desta	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 2/17/06.
2. ☒ The allowed claim(s) is/are 3-21 and 24-41.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
|---|--|

Detailed Action

Response to Remarks

1. Applicant's amendment (see response filed February 17, 2006) with respect to the restriction requirement have been fully considered and acknowledged. Accordingly, the applicants' request for rejoining of withdrawn claims 6-21 (which depend directly or indirectly on newly independent claims 3 and 5) and withdrawn claims 26-33 (which depend directly or indirectly on claim 24) is accepted. The Examiner acknowledges the cancellation of claims 1-2 and 22-23, the amendment to Figs. 7 & 11 and the amendment to the specification, which corrects minor informalities.

Allowance

2. Claims 3-21 and 24-41 are allowed. The following is an examiner's statement of reasons for allowance:

In reference to claims 3, 24, 34 and 40: Russo (IEEE Article, 'Noise Removal from Image Data Using Recursive Neuro-Fuzzy Filters') teaches method for filtering electrical signals (see Russo, page 1818, Abstract and page 1819, Fig. 1). The method includes a number of inputs arranged spatially at a distance from one another and supplies respective pluralities of input signal

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samples (see Russo, page 1819, Fig. 1, input layer, $X_{i+n, j+m}$, where n and m are integers). The output supplies a plurality of filtered signal samples at the output layer (see Russo, $Y_{i+n, j+m}$, where n and m are integers and see also page 1820, section 3, 'The hidden output stage'). The method further includes:

- A number of signal processing channels, each processing channel being formed by a neuro-fuzzy filter to receive a respective plurality of input signal samples and to generate a respective plurality of reconstructed samples (see Russo, Fig. 1, first through third hidden layer, and page 1821, Fig. 3); and
- Adder unit to receive plurality of reconstructed samples and having an output to supply the plurality of filtered signal samples (see Russo, page 1819, Fig. 1, the fourth hidden layer or the adder circuits with an output G_n).

Russo does not teach having each signal-processing channel that includes a sample input to receive alternatively input signal samples and filtered signal samples and to supply the signal samples to be filtered.

The claimed invention includes all the features noted above and further consists of a signal feature-computing unit to receive a respective plurality of samples to be filtered and generate signal features. The system implements a neuro-fuzzy network to receive the signal features and generate reconstruction

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weights through a signal reconstruction unit which receives those samples to be filtered where the reconstruction are used to generate reconstructed samples from the samples to be filtered with their reconstruction weights.

The remaining claims are dependent upon claims 3, 24, 34 and 40 and contain further limitations

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elias Desta whose telephone number is (571)-272-2214. The examiner can normally be reached on M-Th (8:30-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571)-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

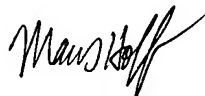
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elias Desta
Examiner
Art Unit 2857

- e.d.

March 2, 2006


MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2857